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New generation wave technology of residual oil-stock liquid-phase oxidation process intensification

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Abstract

In recent years the attitude to bituminous production in Russia significantly changed. In particular, scientific and practical need for naphtha sorting especially for bituminous production is proved. It was promoted by BASHNIYA NP technological classifications of naphtha from the point of view of their suitability for road asphalts production according to which highparaffinic resinous and paraffinic low-resinous naphtha are recognized unsuitable for production of improved brands road asphalts on the existing technological schemes. Heavy asphaltic naphtha is considered to be the most suitable. The problem of the Heavy Petroleum Residue (HPR) maximal involvement in processing is very timely under conditions of oil products amplifying competition in the market on one hand, and against the increasing requirements to their quality from the point of environment protection view - on the other. Development of scientifically applied bases and the bitumen production technology, applied to road construction, should be noted. Especially it is timely in connection with the bituminous production problems which recently became aggravated sharply in Russia. Timely task for oil refineries (oil refinery) currently is ever growing involvement of high-paraffinic resinous naphtha, with application of raw materials preliminary activation express methods (acoustic exaltation, rotor hydrodynamic source of mechanical oscillations, wave influence) in production of receiving oil oxidated asphalts of improved quality.

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Keywords

Bitumen, Heavy petroleum residue, Physics - chemical properties, Structure, Upgrading, Wave activation